



Authorization Basis Change Notice

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ABCN Number 24590-WTP-ABCN-ENS-02-002 Revision 0

ABCN Title Canister Decontamination System (HDH) AB Compliance

II. Description of the Proposed Change to the Authorization Basis

D. Affected Authorization Basis and Implementing Documents (drawings, procedures, plans, etc):

Title	Document Number	Revision
Preliminary Safety Analysis Report to Support Construction; HLW Facility Specific Information	24590-WTP-PSAR-ESH-01-002-04	0
Preliminary Safety Analysis Report to Support Partial Construction; HLW Facility Specific Information	24590-WTP-PSAR-ESH-01-001-04	0
P&ID- HLW Canister Decontamination Handling System	24590-HLW-M6-HDH-00001	0
P&ID- HLW Canister Decontamination Handling System	24590-HLW-M6-HDH-00002	0
Removal of Decon Effluent Collection Vessel (RLD-VSL-00001)	24590-HLW-DCA-PR-02-010	1
Process Flow Diagram HLW Vitrification HLW Canister Decon (System HDH)	24592-HLW-M5-V17T-00006	3
HLW Vitrification Building General Arrangement Plan at El. -21'-0"	24590-HLW-P1-P01T-00001	1
HLW Vitrification Building General Arrangement Sections A-A, B-B, & C-C	24590-HLW-P1-P01T-00008	3
HLW Vitrification Building General Arrangement Section J-J, & Section K-K	24590-HLW-P1-P01T-00011	3

E. Describe the proposed changes to the Authorization Basis documents. Include specific references to the AB documents and design documents that are to be changed:

24590-WTP-PSAR-ESH-01-002-04	2.4.11.1.4 2.3, 3rd paragraph 2.5.3.1.4 2.5.5.1 3.4.1.11.6.1 3.4.2.1.1 Table 3-10	Decontamination Effluent Collection Vessel has been deleted. References to this vessel need to be amended. The Effluent from the Waste Neutralization Vessel will go directly to Pretreatment.
24590-WTP-PSAR-ESH-01-002-04	2.4.11.7	Canister Rinse Bogie Tunnel and Bogie Decon/Maintenance has two different room numbers. Should read as (H-B039B, H-B039A)
24590-WTP-PSAR-ESH-01-002-04	Table 3-1 Column 16	Capacity for the Waste Neutralization Vessel is 4819 gallons, not 4295 gallons.



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E. Describe the proposed changes to the Authorization Basis documents. Include specific references to the AB documents and design documents that are to be changed:

24590-WTP-PSAR-ESH-01-002-04	Table 3-3 3rd row,	The tank number for the nitric acid addition tank is HDH-TK-00001, not T33001. Fluid contents for this tank is 1M nitric acid, not 2M.
24590-WTP-PSAR-ESH-01-002-04	Table 3-3 4th row	The tank number for the cerium addition tank is HDH-TK-00002, not T33002. Maximum capacity for the Cerium Nitrate Addition Tank is 25 gallons not 27 gallons.
24590-WTP-PSAR-ESH-01-002-04	Table 3-3 5th row	Hydrogen peroxide addition pot is called hydrogen peroxide addition tank and is numbered HDH-TK-00003 not T33003
24590-WTP-PSAR-ESH-01-002-04	Table 3-3 6th row	Canister decontamination tank is called canister decontamination vessel and is numbered HDH-VSL-00002 not V33001. The room number for this vessel is H-0133 not H-059. Maximum capacity for the Canister Decon Vessel is the batch capacity of 212 gallons not 560 gallons.
24590-WTP-PSAR-ESH-01-002-04	Table 3-3 7th row	Waste neutralization tank is called waste neutralization vessel and is numbered HDH-VSL-00003 not V33002. The room number for this vessel is H-0133 not H-059. Maximum capacity for the Waste Neutralization Vessel is 4819 gallons not 4295 gallons.
24590-WTP-PSAR-ESH-01-002-04	Table 3-10 Non-H2 Vessels and Embedments section	The vessel number for the Canister Decontamination Vessel is HDH-VSL-00002 not V33001. The vessel number for the Canister Decon Bogie Vessel is HDH-VSL-00001 not V33004. And the vessel number for the Waste Neutralization Vessel is HDH-VSL-00003 not V33002.
24590-WTP-PSAR-ESH-01-002-04	Table 3-11 Row 3	Change vessel number from V33002 to HDH-VSL-00003.
24590-WTP-PSAR-ESH-01-001-04	2.4.11.1.4	Decontamination Effluent Collection Vessel has been deleted and no longer exists in the facility.
24590-WTP-PSAR-ESH-01-001-04	2.4.11.7	Canister Rinse Bogie Tunnel and Bogie Decon/Maintenance has two different room numbers. Should read as (H-B039B, H-B039A)
24590-WTP-PSAR-ESH-01-001-04	2.4.11.17	Canister Decon Cave, Canister Rinse-Bogie Decon, and Canister Rinse Bogie Tunnel are



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		listed with old room numbers. The room numbers should be H-133, H-B039A, and H-B039B.
24590-WTP-PSAR-ESH-01-001-04	3.3.2.1.3 Paragraph 7	Hydrogen peroxide is not stored in the Hydrogen Peroxide Addition Tanks. This reagent is stored in its respective container from the vendor. The hydrogen peroxide addition pot is called the hydrogen peroxide addition tank. Cerium is not stored in the Ceric Nitrate Addition Tank. This reagent is stored in its respective container from the vendor. The mixture from the waste neutralization vessel is transferred to Pre-Treatment Facility, not the liquid waste system.
24590-WTP-PSAR-ESH-01-001-04	3.2 Paragraph 7	The canister decontamination process liquid waste does not go to the liquid waste system as indicated. It will go directly to the Pre-Treatment Facility.
24590-WTP-PSAR-ESH-01-001-04	3.4.2.1.1	Vessel number for the Waste Neutralization Vessel is HDH-VSL-00003, not V33002. Vessel number for the Canister Decon Bogie Vessel is HDH-VSL-00001, not V33004
24590-WTP-PSAR-ESH-01-001-04	Table 3-3 3rd row,	The tank number for the nitric acid addition tank is HDH-TK-00001, not T33001. Fluid contents for this tank is 1M nitric acid, not 2M.
24590-WTP-PSAR-ESH-01-001-04	Table 3-3 4th row	The tank number for the cerium addition tank is HDH-TK-00002, not T33002. Maximum capacity for the Cerium Nitrate Addition Tank is 25 gallons not 27 gallons.
24590-WTP-PSAR-ESH-01-001-04	Table 3-3 5th row	Hydrogen peroxide addition pot is called hydrogen peroxide addition tank and is numbered HDH-TK-00003 not T33003
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E. Describe the proposed changes to the Authorization Basis documents. Include specific references to the AB documents and design documents that are to be changed:

24590-WTP-PSAR-ESH-01-001-04	Table 3-3 7th row	Waste neutralization tank is called waste neutralization vessel and is numbered HDH-VSL-00003 not V33002. The room number for this vessel is H-0133 not H-059. Maximum capacity for the Waste Neutralization Vessel is 4819 gallons not 4295 gallons.
24590-WTP-PSAR-ESH-01-001-04	Table 3-11, page3-69 in Non-H2 Vessels and Embedments section	The vessel number for the Canister Decontamination Vessel is HDH-VSL-00002 not V33001. The vessel number for the Canister Decon Bogie Vessel is HDH-VSL-00001 not V33004. And the vessel number for the Waste Neutralization Vessel is HDH-VSL-00003 not V33002.
24590-WTP-PSAR-ESH-01-001-04	Appendix A Section 1	Section identifies the hazardous situation by system. The Product canister decontamination, swabbing, and monitoring system designation is HDH not H330
24590-WTP-PSAR-ESH-01-001-04	Table 1-2 of Appendix C Page C-ix, Non-H2 Vessels and Embedments section,	The vessel number for the Canister Decontamination Vessel is HDH-VSL – 00002, not V33001. The vessel number for the Canister Decon Bogie Vessel is HDH-VSL-00001, not V33004. And the Vessel number for the Waste Neutralization Vessel is HDH-VSL-00003, not V33002.

F. Explain why the change is needed:

The volumes of vessels and tanks have changed in accordance with the PFD and the design guide criteria. The Decontamination Vessel (HDH-VSL-00002) volume was listed as 560 gallons. This is the volume of the vessel without the canister inside the vessel. The batch volume is 212 gallons. The intent of the AB documents is still the same, but the actual volume of liquid that is in the vessel is 212 gallons (the canister is considered an internal displacement item, therefore not part of the vessel volume). The Ceric Nitrate Addition Tank volume was decreased from 27 gallons to 25 gallons. The Waste Neutralization Vessel (HDH-VSL-00003) has increased in volume from 4295 gallons to 4819 gallons. This increase is due to increase in the batch volume and vessel design criteria.

The PFD that is shown in the PCAR is an old revision (Rev. 0). The current revision is up to Revision #3 with a Revision #4 out on DRR.

The Effluent Collection Vessel has been deleted. This vessel was part of the RLD system. The effluent for HDH system used to go to this vessel until it was deleted. The effluent for HDH system now goes directly to Pretreatment facility. With the deletion of the Effluent Collection Vessel, the retention volume of potentially radioactive fluid will decrease overall. The dose rates will most likely need to be recalculated due to volume changes in the vessels (PSAR sec. 3.4.2.1).



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III. Summary of Safety Evaluation

- G. DOE approval of this AB change is not required because the Safety Evaluation has determined that the change meets all the criteria for Contractor approval of the change.

Summarize the results of the Safety Evaluation by checking the statements below for Administrative Control changes OR Facility changes, not both. Add clarifying remarks, as necessary, to provide complete and accurate information.

Safety Evaluation No. 24590-WTP-SE-ENV-02-002 Rev 0

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For an Administrative Control:

This administrative control change does not affect the SRD. The change falls beneath the level of detail described in the Code of Federal Regulations applicable to the project (10 CFR 820, 10 CFR 830, and 10 CFR 835). The change conforms to the requirements in the top-level safety standards (e.g., DOE/RL-96-0006). The change provides adequate safety because the applicable questions on the Safety Evaluation have been answered in a way that ensures adequate safety following the change. The change conforms to contract requirements and will not result in inconsistencies with other AB or authorization agreement commitments or descriptions.

Remarks:

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For a Facility Control:

This facility change does not affect the SRD. The change does not create a new DBE or increase the frequency or consequence of an analyzed DBE. The change does not result in a decrease in the safety function of an ITS SSC or change how an SDC SSC meets its respective safety function. The change falls beneath the level of detail described in the Code of Federal Regulations applicable to the project (10 CFR 820, 10 CFR 830, and 10 CFR 835). The change conforms to the requirements in the top-level safety standards (e.g., DOE/RL-96-0006). The change provides adequate safety because the applicable questions on the Safety Evaluation have been answered in a way that ensures adequate safety following the change. The change conforms to contract requirements and will not result in inconsistencies with other AB or authorization agreement commitments or descriptions.

Remarks:

All changes are within the intent of the AB documents. All changes are consistent with top level standards and do not result in non-conformance of the contract requirements.

H. Attachments (if any):